

WASHINGTON BRIDGE.

LETTER

FROM

THE SECRETARY OF THE TREASURY,

TRANSMITTING

*Information in relation to the construction of the Washington Bridge  
across the Potomac.*

DECEMBER 8, 1834.

Read, and laid upon the table.

TREASURY DEPARTMENT,

December 5, 1834.

SIR: In obedience to an act of Congress passed the 30th day of June last, confiding the erection of a bridge across the Potomac river, between this city and Alexandria, to this department, immediate measures were taken for its fulfilment. Numerous proposals were early received, and a contract has been made and well secured, which is now in the course of execution in a manner satisfactory to the department, and under which, it is anticipated, the new bridge will be substantially finished by the 1st of November next, and at an expense considerably less than the amount appropriated. The particulars on this subject will be found in the report of the engineer, (A.) In regard to the clause in that act making an appropriation to defray the losses sustained by the person who had, under a verbal contract, incurred expense in the preparation to erect the bridge on a different model, the department has made every inquiry in its power into the real extent and justice of his claims, and paid him thereon the sum of \$7,104 16, as will more fully appear in the statement annexed, (B.) It will be seen that he still anticipates establishing an equitable right to much more; but, until he succeeds in that, no further appropriation will be necessary to meet it, as the balance now on hand for this object exceeds \$12,000.

The correspondence and evidence in detail on this subject will be furnished whenever desired.

All which is respectfully submitted.

LEVI WOODBURY,

*Secretary of the Treasury.*

To the Hon. JOHN BELL,

*Speaker of the House of Reps. U. S.*

## A.

TREASURY DEPARTMENT, OFFICE OF POTOMAC BRIDGE,  
*City of Washington, December 1, 1834.*

SIR: Under the provisions of an act of Congress approved 30th of June, 1834, "authorizing the construction of a bridge across the Potomac at the city of Washington," an advertisement was published by the Secretary of the Treasury, dated 8th of July, 1834, inviting proposals for the execution of the work. The 20th of August was designated as the day on which the sealed tenders would be opened; and, on examination, it was ascertained that thirty distinct propositions had been submitted, ranging from \$82,025 30 to \$158,891 25. The former bid was contingent, and the latter exceeded the appropriation of money for the purpose by the sum of \$28,891 25. The lowest positive proposal was offered by Stephen Clark, George Strover, and Alanson Sumner, of New York, for the sum of \$86,946. These gentlemen had formerly been superintendents of canals in New York, and in those responsible stations discharged their duties to the entire satisfaction of the canal commissioners of that State, and were highly recommended for respectability of character, and ability to carry into effect the intentions of Congress and the Executive in relation to the proposed work; and, as their offer was considered, under every view of the subject, as advantageous to the Government, it was accepted, and the contract awarded to them accordingly. On the 25th of August, 1834, articles of agreement were executed between the Secretary of the Treasury and the contractors; and, on the 3d of September following, a substantial bond in the sum of \$20,000 was given by the latter for the faithful performance of their obligations; which instrument, together with all other papers relating to this subject, are herewith transmitted. After signing the contract, the contractors requested permission (which was granted) to be absent a fortnight, for the purpose of making the necessary preparations for the prosecution of the work.

In the mean time they made arrangements, by sub-contract, for the delivery of materials, and the repairs of the south abutment; and on the 1st of October had furnished for the construction of the bridge 2,000 perches of stone, 1,600 linear feet of white oak piles, and 129,020 feet of pine lumber. Up to the 29th of November enough stone has been thrown into the work to complete the first causeway (900 feet long) 7 feet high, and the remaining 5 feet, of dirt and gravel, will be finished in the course of the present winter; and if the season should prove favorable, the second causeway will also be in an advanced state of construction. Much inconvenience has been experienced, latterly, in delivering stone, in consequence of the prevalence of the northwest winds, which have caused very low tides, and left the shoals over which the causeways pass nearly uncovered, thus preventing the approach of the scows to the bridge, and materially retarding the progress of the work. In commencing the construction of the causeways over an alluvial deposit, in many places 30 feet deep, it was feared that the stone would sink very deep in the mud, but thus far no settling has been discovered, and it is rendered probable that none of any consequence will take place, inasmuch as the substratum is a hard and compact sound, which does not readily yield to the

pressure of the superincumbent mass. Two ice breakers at the extremities of the long causeway have been nearly completed, and two more will be finished, it is expected, this year. In addition to this, the contractors have delivered 5,648 linear feet of white oak piles and spur shores, and have made arrangements for the reception of the remaining quantity of piles, spur shores, mud sills, plank flooring, &c., and have made various examinations, by themselves and their agents, for the purpose of ascertaining the most economical and practicable means of obtaining such other materials as may be required for the completion of the work. They have requested permission to substitute, if it should be found advantageous, white oak instead of Southern yellow pine, for caps and braces; and believing that the public interests would not be injured by the substitution, and influenced by a desire to extend to the contractors every reasonable indulgence, I have complied with their request. Some alterations have been made in the construction of the ice breakers, which will render them stronger, more durable, and less expensive; and it is believed that some changes, or rather additions, may be made in other parts of the bridge, involving an expense by no means commensurate with the improvements to the work, and the increased accommodation extended to the public.

The principal approaches to the bridge, in the city of Washington, are by Maryland avenue and 14th street, and both, particularly by 14th street, are extremely inconvenient, and even dangerous, in consequence of the oblique direction of the axis of the bridge, the awkward position of the toll-house, and the narrow entrance through the gate to the abutment. To obviate these difficulties, it is proposed to run a curved wing wall, as shown in the annexed plan, from the front of the abutment to the curbstone of the west sidewalk of 14th street; to remove the toll-house and the eastern parapet wall of the abutment, and to fill up the whole space within the wing wall and the lower side of Maryland avenue, thus making a broad, commodious, and beautiful approach to the river. It is further proposed, as an additional security to the causeways, to lay the first three feet from the top of the wall in lime mortar, and to cope it with hard Aquia freestone, chisel dressed, six inches thick, eighteen inches wide, bevelled on the upper surface, clamped together with iron, and leaded, and bedded in mortar. It will also be a decided improvement to the appearance of the bridge, to make a slight change in the exterior form of the railing, as shown in the drawings; and the preservation of the wood work as well as its beauty requires that it should be painted and sanded. The citizens of Washington petitioned the Secretary of the Treasury to extend the northeastern, or Maryland draw to the same width as the southern, or Virginia draw, which is sixty-six feet wide; and the propriety of some change in this part of the plan was so obvious to the Secretary, that he directed its width to be increased to at least fifty feet, or to sixty feet if it were deemed expedient by the engineer. If the northern channel of the river should be improved for purposes of navigation to Georgetown, or to the mouth of the Tiber canal, there will be every reason for making the two draws of the same dimensions; and as the increased expense will be inconsiderable, I respectfully recommend that the petition be granted.

The proposed alterations, if adopted, will require the following additional expenditures, viz.

For improving the approach in the city of Washington	\$841 50
For widening the northern draw, and increasing the strength of the trestles by which the draws are supported	200 00
For laying three feet high of protection wall in lime mortar	1,585 00
For 3,200 feet (run) of coping, at \$1 25 per foot run	4,000 00
For change in form of exterior hand rail	852 00
For painting and sanding hand rail and stanchions	2,983 00
For tar and oil coating on caps and braces	225 00
Contingencies and superintendence	5,000 00
Amount of present contract	86,946 00
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Total	\$102,632 50
Amount of appropriation	130,000 00
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Probable balance which will remain in the Treasury after the bridge is completed, not including the expense of filling up the swash channel if it should be ordered by Congress

\$27,367 50

The bridge, when completed, according to the terms of the present contract, will have two abutments of solid stone, earth and gravel, protected to the height of the parapets by substantial stone walls five feet wide at base, three feet five inches at seven feet high, and one foot eight inches at top, battering on the exterior face one inch and a half to the foot.

The wood work will consist of 125 sections or sets of trestles, with their connecting stringers, roadways, guard rails, &c. Each set of trestles or sections will be composed of the following parts and materials, and be constructed in the following manner, viz.

Six piles, to average thirty-six feet in length, to square thirteen inches at the larger end, and to be from eight to nine inches diameter at the point.

Two mud sills, sixty feet long, and twelve inches square.

Six braces, twenty feet long, and seven inches by twelve.

One cap, thirty-nine feet, long by thirteen inches square.

Two spur shores, fifty feet, by thirteen inches square at the larger end, and nine inches in diameter at the point. The piles and spur shores to be of good white oak, sound, straight grained, and free from every defect, and to be dressed above low water, and to be driven with such force as the engineer may direct. All the other wood materials to be of the best Southern yellow pine. The mud sills, one on each side of the row of piles at the lowest water line, to be dressed on the sides next to the piles, and fastened to them with bolts of ten pounds weight each.

The braces to be dressed on the sides next to the piles, and fastened to them with bolts of three pounds each. The caps to be morticed on the heads of the piles, and connected with them by locust trenails. The spur shores to be driven between the mud sills, at an angle of 45°, and bolted to them and to the piles below the caps.



The sections or trestles to be connected by sixteen stringers, each twenty-seven feet long; twelve of them to be twelve by seven inches, two to be twelve by twelve inches, and two to be twelve by nine inches. The stringers to be rounded on their upper surfaces, and bolted at each end to the caps, also rounded. The carriageway to be twenty-seven feet wide, including the interior stanchions, of three inch gum plank spiked to the stringers. The footways to be four feet and a half wide, of two inch plank, laid and spiked on cross pieces of three inch stuff. Throughout the whole length of the bridge and causeways, there will be four lines of guard rails, to be supported on stanchions at every eight feet. All the bolts, spikes, &c., to be of the best American or Swedes wrought iron.

The roadway to be 12 feet above low water.

There will be two causeways or embankments. The one 925 feet long, the other 675 feet long, to be raised 12 feet above low water; to be 42 feet wide at low water line, and 39 feet at top, (from outside to outside.) The protection wall to be 5 feet at base, 3 feet 5 inches at 7 feet high, and 1 foot 8 inches at top. The interior to be filled with stone to the height of 7 feet, and the remaining 5 feet to be of clay and gravel. The extremities of the causeways will be slightly rounded off, and will be protected by a row of sheet piles driven close, and bound together on the exterior with iron bands, and connected with the stone work by iron anchors.

The draw will be constructed on the principle of the one now in use; to be placed on cast iron wheels, and to move horizontally in the direction of the axis of the bridge, by means of chains and wheels, or capstans on railways. All the parts of the draws will be finished with the greatest care, and of the very best materials; and when completed according to their requirements, they can be opened or closed with ease in two and a half minutes. On the 28th of August, the draw over the southern, or Virginia channel of the river failed in consequence of too many cattle being permitted to crowd together on it at the same time. As the drove approached the draw, the keeper requested the drover to divide his cattle into sets or parties of 10 or 12 each, which was done accordingly; one party had passed the draw several rods, when suddenly, from some unknown cause, they were seized with a panic, and ran back furiously on another party, which had likewise been detached from the main body. The meeting took place at the extremity of the arm or lever of the draw, which immediately yielded to the shock. There were 25 or 30 head of fat beeves on the draw at the time of its failure, and were all precipitated into the river. The draw was constructed on an approved principle, and capable of sustaining any weight which, under ordinary circumstances, it would be prudent or desirable to transport across a wooden bridge. The expense of repairing the injury was \$361, which, by a strict interpretation of the advertisement of the Secretary of the Treasury, and made part of the article of agreement, would be chargeable to the contractors; but, as no blame attaches to the keeper, and as the accident was of a nature not easily anticipated or prevented by the contractors, it does not seem reasonable to hold them accountable for the damages.

The bridge is to be passable by the 1st of October, 1835, and completely finished by the 1st of November of the same year; and there is

every reason to believe that the work will be executed within the prescribed time.

Between the two causeways, a space of 365 feet, called by the boatmen a *swash or blind channel*, has been left open, and will be bridged over in a manner similar to the other parts of the wood work. It is apprehended by many intelligent persons that, when the two causeways are completed, the surface of the river being very much contracted, the increased velocity and force of the current may open the swash channel, which will, in that event, become the principal avenue to Georgetown, and seriously injure the present channels; thus probably depriving the city of Washington of the benefits of navigation. Although I believe the nature of the alluvial deposit is such as to prevent any evil consequence from ensuing, yet, as there is a possibility of the worst apprehensions on the subject being realized, I respectfully recommend that the matter be brought before Congress, in order that the Secretary of the Treasury may be empowered to fill it up, if necessary, on the same plan as the other causeways, and make one continuous causeway across the two shoals and the intervening swash channel. The effect of this measure would probably be beneficial to the navigation of the river, by causing all the water to flow through the main channels, and permanently increase their depth.

According to the returns furnished by the contractors, there were, on the 29th November, 142 men employed on the work, exclusive of those engaged in procuring lumber, the exact number of which cannot be easily ascertained.

On the 1st of October, I directed the keeper of the draw to register as nearly as possible all the passing and repassing on the bridge, and, from his report, submit the following result, which I am satisfied falls short of the whole amount, owing to the impossibility of registering those who passed late at night, or at times when the keeper was otherwise employed.

October, 1834.	November, 1834.
3,741 passengers (on foot)	3,340 passengers (on foot)
1,229 horses	1,721 horses
714 cattle	1,113 cattle
295 hogs	548 hogs
179 stages	165 stages
395 carriages (of two horses)	614 carriages (of two horses)
764 carryalls	315 carryalls
495 gigs	527 gigs
184 wagons	160 wagons
41 drays	17 drays
1,015 carts	888 carts
	174 sheep

Applying to these returns the tolls formerly charged by the Potomac Bridge Company, and we have for the months of October and November the sum of \$3,581, which would probably fall short of the average for the rest of the year; but assuming them as the average, we have the sum of

\$21,486 as the value of the free bridge to the community ; and this will be very much increased when the new bridge is completely finished.

All which is respectfully submitted.

I have the honor to be, sir,

Your obedient servant,

GEO. W. HUGHES,

*Superintending Engineer Potomac Bridge.*

To the Hon. LEVI WOODBURY,

*Secretary of the Treasury.*

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Articles of agreement made this twenty-fifth day of August, in the year of our Lord one thousand eight hundred and thirty-four, between Levi Woodbury, Secretary of the Treasury, acting under the authority of an act of Congress, entitled an act "authorizing the construction of a bridge across the Potomac," of the one part, and Alanson Sumner, Stephen Clark, and George Strover, of the State of New York, on the other part, witness :

That the said Alanson Sumner, Stephen Clark, and George Strover, for themselves, their heirs, executors, and administrators, do hereby covenant with the said Levi Woodbury, Secretary of the Treasury, as aforesaid, and his successors, that they, the said Alanson Sumner, Stephen Clark, and George Strover, will take down and remove the bridge now leading across the Potomac river, from the city of Washington to the farm of R. B. Mason, Alexandria country, District of Columbia, and on the site thereof will build and completely finish a new bridge over the said river, according to the plans submitted by the superintending engineer, and according to the specifications, in the manner and upon the terms and conditions set forth and referred to in the advertisements of the said Secretary of the Treasury, which plans and advertisements are hereunto annexed, and hereby make a part of this agreement, and their several stipulations and conditions are to be fulfilled as a part of it : Provided, nevertheless, that the power is reserved to the said Secretary, or the Congress of the United States, to make, or cause to be made, such alterations in the plans and specifications as to them may, from time to time, be deemed proper, and especially in respect to the width of the northeastern draw ; and in case any such alterations be made, the superintending engineer is hereby authorized to make such additions to or deductions from the price contracted to be paid for the said work as shall, by him, be deemed proportionate to the contract price. And it is hereby further agreed by the party of the first part, that there shall be paid to the said party of the second part fifty thousand two hundred and ten dollars for the wood work of the bridge, which sum of fifty thousand two hundred and ten dollars is expressly declared to cover all the expenses of the draws of said bridge, and all the materials of wood and iron, and the workmanship necessary and proper for the due completion of the aforesaid work, according to the plans and specifications ; and also the sum of thirty-four thousand two hundred and thirty-six dollars for the complete construction, including all the materials of the causeways or embankments, and the repairs of the abutments ; and also the sum of two

thousand five hundred dollars for the erection of twenty ice breakers in advance of the causeways, making a gross sum of eighty-six thousand nine hundred and forty-six dollars (\$86,946 for the completion of the bridge in all its parts.

And the said parties of the second part hereby covenant and agree to undertake, commence, and execute the several parts of the said work in the order of time directed by the superintending engineer, and in no other order of time; and that they will provide and employ, at all times, on the work, such necessary and suitable labor, mechanical skill, machinery, and materials as may be required of them; and that they will remove and keep from the work, to such a distance as the engineer may require, all materials and other matter as in his opinion may tend unnecessarily to obstruct the free navigation of the river. And it is covenanted and agreed by and between the said parties, that all materials to be used in the said bridge shall be subject to the inspection and the acceptance or rejection of the said engineer, who shall have power to prevent any materials not approved from being put into the work, or, if discovered to have been employed, he may, if necessary, suspend the work till the same be removed.

And it is further covenanted and agreed by and between the said parties, that estimates of work done shall be made monthly by the engineer, and payments made to the said parties of the second part, in proportion to the contract prices; it being understood that no estimate or payments are to be made for the parts of the causeways below low water; and that three-fourths only of the amount of the estimate for materials and labor be paid, and on the last or final settlement all errors are to be corrected, and the balance, together with the one-fourth retained as aforesaid, to be paid to the said contractors.

And it is stipulated and agreed by the parties of the second part, that no member of Congress, nor any person in the service of the United States, is or shall be admitted to any share or part, directly or indirectly, in this contract, or to any benefit to arise therefrom.

In testimony whereof, the parties of the second part have hereunto set their hands and seals, and the party of the first part set his hand, and caused the seal of the Treasury Department to be affixed, this twenty-fifth day of August, in the year of our Lord one thousand eight hundred and thirty-four.

Witnesses:

S. M. M'KEAN.

GILBERT RODMAN.

STEPHEN CLARK.

ALANSON SUMNER.

ALANSON SUMNER, for

GEORGE STROVER.

LEVI WOODBURY,

*Secretary of the Treasury.*

[L. s.]

[L. s.]

[L. s.]

[L. s.]

[L. s.]

Know all men by these presents, that we, Alanson Sumner, of Albany, Stephen Clark, of Schenectady, and George Strover, of Saratoga, in the State of New York, bridge contractors, and Harvy Davis, Resolved Givens, Thomas Palmer, and Daniel D. Campbell, of Schenectady, New York,



are held and firmly bound to the United States of America, in the sum of twenty thousand dollars, current money of the United States, to be paid to the said United States aforesaid, their certain attorney or assigns: for which payment, well and truly to be made, we bind ourselves and each of us, our and each of our heirs, executors, and administrators, firmly by these presents.

Now, whereas the above named Alanson Sumner, Stephen Clark, and George Strover, have become bound by a certain contract in writing, duly entered into and executed by themselves on the one part, and the Secretary of the Treasury, on behalf of the United States, on the other part, bearing date the twenty-fifth day of August, in the year one thousand eight hundred and thirty-four, for the construction of a bridge across the Potomac river. The condition of this obligation is such, that if the above bounden Alanson Sumner, Stephen Clark, and George Strover, their heirs, executors, or administrators, shall faithfully perform all and singular the stipulations and agreements contained in the aforesaid contract, then this obligation to be void and of no effect, otherwise to remain in full force and virtue.

In testimony whereof, we have hereunto set our hands and seals this third day of September, in the year of our Lord one thousand eight hundred and thirty-four.

ALANSON SUMNER.	[SEAL.]
STEPHEN CLARK.	[SEAL.]
GEORGE STROVER.	[SEAL.]
HARVY DAVIS.	[SEAL.]
R. GIVENS.	[SEAL.]
THOMAS PALMER.	[SEAL.]
D. D. CAMPBELL.	[SEAL.]

S. H. DILLINGHAM, witness as to Sumner and Strover.

B. M. MUMFORD, as to Stephen Clark and Thomas Palmer.

J. D. SMITH, witness as to H. Davis and R. Givens.

LEMUS ROBINSON, jr.

To whom it may concern :

Mr. Sumner has shown me a bond for twenty thousand dollars, signed by himself, Stephen Clark, George Strover, H. Davis, R. Givens, Thomas Palmer, and D. D. Campbell, and has requested my opinion of the responsibility of the parties. I know the signers, and should consider their bond perfectly safe and good for ten times the amount of the above.

THOMAS W. OLCOTT.

ALBANY, *Sept.* 18, 1834.

I cannot speak of the responsibility of the signers of the annexed bond from any personal knowledge of my own, but, upon the certificate of Thomas W. Olcott, Esq., annexed thereto, I should not doubt that the signers are perfectly safe for the sum mentioned in the bond.

Mr. Olcott is cashier of one of the most flourishing and sound banks in the city of Albany, and is a vigilant officer and most respectable man.

S. BEARDSLY.

WASHINGTON, *Sept.* 25, 1834.

B.

## TREASURY DEPARTMENT.

Register's Office, December 5, 1834.

I hereby certify that the following sums have been paid to Orange H. Dibble, for loss incurred in making preparations for building a bridge across the Potomac river at Washington, agreeably to the 3d section of the act of 30th June, 1834, viz.

July 28, 1834, warrant No. 9563,	-	-	-	7,000 00
September 25, do No. 9885,	-	-	-	104 16
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				7,104 16

T. L. SMITH, Register.